

What is claimed is:

1. A method of making a filter element comprising:
inserting an end portion of a filter into a liquid bonding material of an end cap;
inserting a narrow edge at an end portion of a core into the liquid bonding material,
5 including separating some of the liquid bonding material from the end portion of the filter;
bonding the end portion of the filter to the end cap; and
supporting an inner periphery of the end portion of the filter by an outer wall of the
core near the bond.
- 10 2. The method of claim 1 wherein the end portion of the filter and the end portion of
the core are inserted into the liquid bonding material simultaneously.
3. The method of claim 1 wherein the end portion of the filter and the end portion of
the core are inserted into the liquid bonding material at different times.
- 15 4. The method of claim 1 wherein inserting the narrow edge of the core into the
liquid bonding material and separating some of the liquid bonding material from the end
portion of the filter includes directing liquid bonding material away from the end portion of
the filter.
- 20 5. The method of claim 4 wherein directing liquid bonding material away from the
end portion of the filter includes directing liquid bonding material into an annular recess in
the end portion of the core, the method further comprising solidifying liquid bonding material
in the recess.
- 25 6. The method of claim 1 further comprising venting gas in the recess through vents
in the core.
7. The method of claim 1 further comprising solidifying bonding material in contact
30 with or facing an interlock arrangement at the end portion of the core.
8. The method of claim 7 further comprising not fixing the core to the end cap and
arranging the core to move with respect to the end cap.
- 35 9. The method of claim 8 wherein the core is arranged to move axially but not
rotationally with respect to the end cap.

10. The method of claim 1 further comprising not fixing the core to the end cap.

11. The method of claim 1 further comprising fixing the core to the end cap.

5 12. The method of claim 1 wherein supporting the inner periphery of the filter includes arranging the filter and the core such that the inner periphery at the end portion of the filter intimately faces the outer wall of the core.

10 13. The method of claim 1 wherein supporting the inner periphery of the filter includes contacting the inner periphery at the end portion of the filter and the outer wall of the core.